

REMARKS

Reconsideration is respectfully requested. Claims 1-13 were present in the application. Claims 1, 11, 12, and 13 are amended herein. New claims 14-27 are added.

The Examiner has withdrawn the previous indication of allowable subject matter being in claims 5, 7, and 9 (which were rewritten as claims 11-13 in the previous response to office action), and is rejecting all the claims 1-13 under 35 U.S.C. §103 as allegedly being obvious in view of JP 7-336138 in view of JP 60-136156 and further in view of EP 0661805. Applicants respectfully traverse.

The Examiner refers to FIG. 12 of JP 60-136156 as showing the opposite ends of the conductors attached and the conductors are formed on a substrate.

JP 60-136156 discloses an inductor element formed with metal layers in spiral shape connected in series. One of the features of this document is that it has the metal layers in spiral shape and another feature is that the different metal layers are connected in series. See Fig. 12 of JP 60-136156, which shows that structure in the case where the metal layers having the same shape are connected in series.

This is in contrast to applicants' claimed invention where one conductor is not connected in series with the other conductor.

Claims 1 and 11-13 are amended herein to recite that an end of the conductor in a layer that is near the substrate is open, not connected. This may be observed in FIG. 3, for example, of the specification as filed. Such a concept is not taught or suggested by the documents cited, whether considered alone, or whether combined.

Further, the documents relied on by the Examiner do not show having spiral shaped conductors with both outer ends mutually connected, and combining the documents would not result in or suggest this teaching. Applicants submit independent claim 14 which includes this concept. It would not be obvious to provide this structure, as it is not taught or suggested.

The Examiner in a co-pending application by one of the applicant's herein (U.S. Patent Appl. 09/980,959) cited U.S. 5,095,357 (Andoh et al), which is cited herewith in an information disclosure statement. Andoh et al show in FIG. 16(a), a variable inductor with first and second spiral layers, the outermost ends of the upper and lower spirals being connected. A circuit element 70, which may be an attenuator or an amplifier, controls the current flowing through the lower spiral to vary the impedance of the upper spiral. This differs from applicants' invention in its use of the circuit 70. The document mentions that the connection between upper and lower spirals can be modified as shown in Fig. 17.

Applicants' new claim 14 recites the connection as being via a passive element. This is distinguishable from the circuit 70 of Andoh et al. Claims 17 and 18 further define that description to "a conductor" and "a wire". Support for these amendments are found in the specification at page 10, line 26 and following.

These claims 14-19 also avoid the teaching and suggestion of JP 60-136156, which appears to show the inner ends connected and an outer to inner connection, but does not show both outer ends of the spiral connected. Making the combination proposed by the Examiner would not result in the claimed invention.

New claims 120-23 are added herein, and recite the case shown in FIG. 3, wherein the conductors are spiral shape and an outer end of the layer closest to the substrate is connected to the inner end of the upper layer. This is opposite of what is shown by FIG. 12 of JP 60-13156, where the inner end of the lower layer is connected to the outer end of the upper layer. It is respectfully submitted that these claims are also allowable.

New claims 24-27 recite elements corresponding to those of claim 14, but specifying that the conductors have inner and outer ends. New claims 28-31 recite elements corresponding to those of claim 20, but specifying that the conductors have inner and outer ends. These claims are also submitted to be allowable.

Appl. No. 09/980,960
Amdt. dated February 24, 2004
Reply to Office action of August 25, 2003

In light of the above noted amendments and remarks, this application is believed in condition for allowance and notice thereof is respectfully solicited. The Examiner is asked to contact applicant's attorney at 503-224-0115 if there are any questions.

Respectfully submitted,


James H. Walters, Reg. No. 35,731

Customer number 802
DELLETT AND WALTERS
Suite 1101
310 S.W. Fourth Avenue
Portland, Oregon 97204 US
(503) 224-0115
DOCKET: A-412

Certificate of Mailing

I hereby certify that this correspondence is being deposited as first class mail with the United States Postal Service in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this February 24, 2004.

